

WE CLAIM:

1. A variant of a polypeptide of interest comprising a T-cell epitope, wherein said variant differs from said polypeptide of interest by having an altered T-cell epitope such that said 5 variant and said polypeptide produce different immunogenic responses in an individual.
2. The variant of claim 1 wherein said immunogenic response produced by said variant is less than said immunogenic response produced by said polypeptide of interest.
- 10 3. The variant of claim 1 wherein said immunogenic response produced by said variant is greater than said immunogenic response produced by said polypeptide of interest.
4. The variant of claim 1 wherein said polypeptide of interest is selected from the group consisting of enzymes, hormones, factors, vaccines and cytokines.
- 15 5. The variant of claim 1 wherein said polypeptide of interest is not recognized by said individual as endogenous to said individual.
6. The variant of claim 1 wherein said polypeptide of interest is an enzyme selected from the group consisting of lipase, cellulase, endo-glucosidase H, protease, carbohydrases, 20 reductase, oxidase, isomerase, transferase, kinase and phosphatase.
7. The variant of claim 1 wherein said T-cell epitope is altered with amino acid substitutions.
- 25 8. The variant of claim 1 wherein said T-cell epitope is altered by having a terminal portion of said polypeptide of interest comprising said T-cell epitope replaced with a corresponding terminal portion of a homolog of said polypeptide of interest wherein said homolog does not comprise a T-cell epitope identical to said replaced T-cell epitope.
- 30 9. The variant of claim 8 wherein said variant comprises at least one less T-cell epitope than said polypeptide of interest and said homolog combined.
10. The variant of claim 8 wherein said variant comprises at least two less T-cell epitopes than said polypeptide of interest and said homolog combined.
- 35 11. A nucleic acid encoding the variant of claim 1.
12. An expression vector comprising the nucleic acid of claim 11.

13. A host cell transformed with the expression vector of claim 12.